RAW SEQUENCE LISTING   DATE: 07/10/2006
PATENT APPLICATION: US/10/584,810   TIME: 10:24:35

Input Set : **A:\21471 SEQ LSTG 6 16 06.TXT**
Output Set: **N:\CRF4\07102006\J584810.raw**

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 4 <110> APPLICANT: Merck & Co., Inc.
 6 <120> TITLE OF INVENTION: HCV RNA-DEPENDENT RNA POLYMERASE
 9 <130> FILE REFERENCE: 21471 PCT
C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/584,810
C--> 11 <141> CURRENT FILING DATE: 2006-06-28
11 <150> PRIOR APPLICATION NUMBER: 60/535,708
12 <151> PRIOR FILING DATE: 2004-01-09
14 <160> NUMBER OF SEQ ID NOS: 28
16 <170> SOFTWARE: FastSEQ for Windows Version 4.0
18 <210> SEQ ID NO: 1
19 <211> LENGTH: 571
20 <212> TYPE: PRT
21 <213> ORGANISM: Artificial Sequence
23 <220> FEATURE:
24 <223> OTHER INFORMATION: modified HCV NS5B
26 <400> SEQUENCE: 1
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28  1               5                  10                  15
29 Pro Glu Glu Glu Lys Leu Pro Ile Asn Pro Leu Ser Asn Ser Leu Leu
30              20                  25                  30
31 Arg Tyr His Asn Lys Val Tyr Cys Thr Thr Thr Lys Ser Ala Ser Leu
32          35                  40                  45
33 Arg Ala Lys Lys Val Thr Phe Asp Arg Met Gln Val Leu Asp Ser Tyr
34      50                  55                  60
35 Tyr Asp Ser Val Leu Lys Asp Ile Lys Leu Ala Ala Ser Lys Val Thr
36 65                  70                  75                  80
37 Ala Arg Leu Leu Thr Met Glu Glu Ala Cys Gln Leu Thr Pro Pro His
38              85                  90                  95
39 Ser Ala Arg Ser Lys Tyr Gly Phe Gly Ala Lys Glu Val Arg Ser Leu
40              100                 105                 110
41 Ser Gly Arg Ala Val Asn His Ile Lys Ser Val Trp Lys Asp Leu Leu
42          115                 120                 125
43 Glu Asp Ser Glu Thr Pro Ile Pro Thr Thr Ile Met Ala Lys Asn Glu
44      130                 135                 140
45 Val Phe Cys Val Asp Pro Thr Lys Gly Gly Lys Lys Ala Ala Arg Leu
46 145                 150                 155                 160
47 Ile Val Tyr Pro Asp Leu Gly Val Arg Val Cys Glu Lys Met Ala Leu
48              165                 170                 175
49 Tyr Asp Ile Thr Gln Lys Leu Pro Gln Ala Val Met Gly Ala Ser Tyr
50              180                 185                 190
51 Gly Phe Gln Tyr Ser Pro Ala Gln Arg Val Glu Phe Leu Leu Lys Ala
52          195                 200                 205
53 Trp Ala Glu Lys Lys Asp Pro Met Gly Phe Ser Tyr Asp Thr Arg Cys
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RAW SEQUENCE LISTING   DATE: 07/10/2006
PATENT APPLICATION: **US/10/584,810**   TIME: 10:24:35

Input Set : **A:\21471 SEQ LSTG 6 16 06.TXT**
Output Set: **N:\CRF4\07102006\J584810.raw**

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54      210                     215                     220
55 Phe Asp Ser Thr Val Thr Glu Arg Asp Ile Arg Thr Glu Glu Ser Ile
56 225                     230                     235                     240
57 Tyr Arg Ala Cys Ser Leu Pro Glu Glu Ala His Thr Ala Ile His Ser
58                     245                     250                     255
59 Leu Thr Glu Arg Leu Tyr Val Gly Gly Pro Met Phe Asn Ser Lys Gly
60                     260                     265                     270
61 Gln Thr Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr
62             275                     280                     285
63 Ser Met Gly Asn Thr Ile Thr Cys Tyr Val Lys Ala Leu Ala Ala Cys
64     290                     295                     300
65 Lys Ala Ala Gly Ile Ile Ala Pro Thr Met Leu Val Cys Gly Asp Asp
66 305                     310                     315                     320
67 Leu Val Val Ile Ser Glu Ser Gln Gly Thr Glu Glu Asp Glu Arg Asn
68                     325                     330                     335
69 Leu Arg Ala Phe Thr Glu Ala Met Thr Arg Tyr Ser Ala Pro Pro Gly
70                     340                     345                     350
71 Asp Pro Pro Arg Pro Glu Tyr Asp Leu Glu Leu Ile Thr Ser Cys Ser
72             355                     360                     365
73 Ser Asn Val Ser Val Ala Leu Gly Pro Gln Gly Arg Arg Arg Tyr Tyr
74     370                     375                     380
75 Leu Thr Arg Asp Pro Thr Thr Pro Ile Ala Arg Ala Ala Trp Glu Thr
76 385                     390                     395                     400
77 Val Arg His Ser Pro Val Asn Ser Trp Leu Gly Asn Ile Ile Gln Tyr
78                     405                     410                     415
79 Ala Pro Thr Ile Trp Ala Arg Met Val Leu Met Thr His Phe Phe Ser
80                     420                     425                     430
81 Ile Leu Met Ala Gln Asp Thr Leu Asp Gln Asn Leu Asn Phe Glu Met
82             435                     440                     445
83 Tyr Gly Ala Val Tyr Ser Val Ser Pro Leu Asp Leu Pro Ala Ile Ile
84     450                     455                     460
85 Glu Arg Leu His Gly Leu Asp Ala Phe Ser Leu His Thr Tyr Thr Pro
86 465                     470                     475                     480
87 His Glu Leu Thr Arg Val Ala Ser Ala Leu Arg Lys Leu Gly Ala Pro
88             485                     490                     495
89 Pro Leu Arg Ala Trp Lys Ser Arg Ala Arg Ala Val Arg Ala Ser Leu
90             500                     505                     510
91 Ile Ser Arg Gly Gly Arg Ala Ala Val Cys Gly Arg Tyr Leu Phe Asn
92             515                     520                     525
93 Trp Ala Val Lys Thr Lys Leu Lys Leu Thr Pro Leu Pro Glu Ala Arg
94     530                     535                     540
95 Leu Leu Asp Leu Ser Ser Trp Phe Thr Val Gly Ala Gly Gly Gly Asp
96 545                     550                     555                     560
97 Ile Tyr His Ser Val Ser Arg Ala Arg Pro Arg
98                     565                     570
101 <210> SEQ ID NO: 2
102 <211> LENGTH: 571
103 <212> TYPE: PRT
104 <213> ORGANISM: Artificial Sequence
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RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/584,810

DATE: 07/10/2006
TIME: 10:24:35

Input Set : A:\21471 SEQ LSTG 6 16 06.TXT
Output Set: N:\CRF4\07102006\J584810.raw

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106 <220> FEATURE:
107 <223> OTHER INFORMATION: modified HCV NS5B
109 <400> SEQUENCE: 2
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111  1               5                  10                  15
112 Pro Glu Glu Glu Lys Leu Pro Ile Asn Pro Leu Ser Asn Ser Leu Met
113             20                  25                  30
114 Arg Phe His Asn Lys Val Tyr Ser Thr Thr Ser Arg Ser Ala Ser Leu
115         35                  40                  45
116 Arg Ala Lys Lys Val Thr Phe Asp Arg Val Gln Val Leu Asp Ala His
117     50                  55                  60
118 Tyr Asp Ser Val Leu Gln Asp Val Lys Arg Ala Ala Ser Lys Val Ser
119 65                  70                  75                  80
120 Ala Arg Leu Leu Thr Val Glu Glu Ala Cys Ala Leu Thr Pro Pro His
121             85                  90                  95
122 Ser Ala Lys Ser Arg Tyr Gly Phe Gly Ala Lys Glu Val Arg Ser Leu
123             100                 105                 110
124 Ser Arg Arg Ala Val Asn His Ile Arg Ser Val Trp Glu Asp Leu Leu
125         115                 120                 125
126 Glu Asp Gln His Thr Pro Ile Asp Thr Thr Ile Met Ala Lys Asn Glu
127     130                 135                 140
128 Val Phe Cys Ile Asp Pro Thr Lys Gly Gly Lys Lys Pro Ala Arg Leu
129 145                 150                 155                 160
130 Ile Val Tyr Pro Asp Leu Gly Val Arg Val Cys Glu Lys Met Ala Leu
131             165                 170                 175
132 Tyr Asp Ile Ala Gln Lys Leu Pro Lys Ala Ile Met Gly Pro Ser Tyr
133         180                 185                 190
134 Gly Phe Gln Tyr Ser Pro Ala Glu Arg Val Asp Phe Leu Leu Lys Ala
135         195                 200                 205
136 Trp Gly Ser Lys Lys Asp Pro Met Gly Phe Ser Tyr Asp Thr Arg Cys
137     210                 215                 220
138 Phe Asp Ser Thr Val Thr Glu Arg Asp Ile Arg Thr Glu Glu Ser Ile
139 225                 230                 235                 240
140 Tyr Gln Ala Cys Ser Leu Pro Gln Glu Ala Arg Thr Val Ile His Ser
141             245                 250                 255
142 Leu Thr Glu Arg Leu Tyr Val Gly Gly Pro Met Thr Asn Ser Lys Gly
143             260                 265                 270
144 Gln Ser Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Phe Thr Thr
145         275                 280                 285
146 Ser Met Gly Asn Thr Met Thr Cys Tyr Ile Lys Ala Leu Ala Ala Cys
147     290                 295                 300
148 Lys Ala Ala Gly Ile Val Asp Pro Val Met Leu Val Cys Gly Asp Asp
149 305                 310                 315                 320
150 Leu Val Val Ile Ser Glu Ser Gln Gly Asn Glu Glu Asp Glu Arg Asn
151             325                 330                 335
152 Leu Arg Ala Phe Thr Glu Ala Met Thr Arg Tyr Ser Ala Pro Pro Gly
153             340                 345                 350
154 Asp Leu Pro Arg Pro Glu Tyr Asp Leu Glu Leu Ile Thr Ser Cys Ser
155             355                 360                 365
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RAW SEQUENCE LISTING   DATE: 07/10/2006
PATENT APPLICATION: US/10/584,810   TIME: 10:24:35

Input Set : A:\21471 SEQ LSTG 6 16 06.TXT
Output Set: N:\CRF4\07102006\J584810.raw

```
156 Ser Asn Val Ser Val Ala Leu Asp Ser Arg Gly Arg Arg Arg Tyr Phe
157     370             375             380
158 Leu Thr Arg Asp Pro Thr Thr Pro Ile Thr Arg Ala Ala Trp Glu Thr
159 385             390             395             400
160 Val Arg His Ser Pro Val Asn Ser Trp Leu Gly Asn Ile Ile Gln Tyr
161             405             410             415
162 Ala Pro Thr Ile Trp Val Arg Met Val Ile Met Thr His Phe Phe Ser
163             420             425             430
164 Ile Leu Leu Ala Gln Asp Thr Leu Asn Gln Asn Leu Asn Phe Glu Met
165         435             440             445
166 Tyr Gly Ala Val Tyr Ser Val Asn Pro Leu Asp Leu Pro Ala Ile Ile
167     450             455             460
168 Glu Arg Leu His Gly Leu Glu Ala Phe Ser Leu His Thr Tyr Ser Pro
169 465             470             475             480
170 His Glu Leu Ser Arg Val Ala Ala Thr Leu Arg Lys Leu Gly Ala Pro
171             485             490             495
172 Pro Leu Arg Ala Trp Lys Ser Arg Ala Arg Ala Val Arg Ala Ser Leu
173             500             505             510
174 Ile Ala Gln Gly Ala Arg Ala Ala Ile Cys Gly Arg Tyr Leu Phe Asn
175         515             520             525
176 Trp Ala Val Lys Thr Lys Leu Lys Leu Thr Pro Leu Pro Glu Ala Ser
177     530             535             540
178 Arg Leu Asp Leu Ser Gly Trp Phe Thr Val Gly Ala Gly Gly Gly Asp
179 545             550             555             560
180 Ile Tyr His Ser Val Ser His Ala Arg Pro Arg
181             565             570
184 <210> SEQ ID NO: 3
185 <211> LENGTH: 571
186 <212> TYPE: PRT
187 <213> ORGANISM: Artificial Sequence
189 <220> FEATURE:
190 <223> OTHER INFORMATION: modified HCV NS5B
192 <400> SEQUENCE: 3
193 Met Ser Met Ser Tyr Thr Trp Thr Gly Ala Leu Ile Thr Pro Cys Ser
194 1               5               10              15
195 Ala Glu Glu Glu Lys Leu Pro Ile Ser Pro Leu Ser Asn Ser Leu Leu
196             20              25              30
197 Arg His His Asn Leu Val Tyr Ser Thr Ser Ser Arg Ser Ala Ser Gln
198         35              40              45
199 Arg Gln Arg Lys Val Thr Phe Asp Arg Leu Gln Val Leu Asp Asp His
200     50              55              60
201 Tyr Lys Thr Ala Leu Lys Glu Val Lys Glu Arg Ala Ser Arg Val Lys
202 65              70              75              80
203 Ala Arg Met Leu Thr Ile Glu Glu Ala Cys Ala Leu Val Pro Pro His
204             85              90              95
205 Ser Ala Arg Ser Lys Phe Gly Tyr Ser Ala Lys Asp Val Arg Ser Leu
206             100             105             110
207 Ser Ser Arg Ala Ile Asp Gln Ile Arg Ser Val Trp Glu Asp Leu Leu
208     115             120             125
```

RAW SEQUENCE LISTING   DATE: 07/10/2006
PATENT APPLICATION: US/10/584,810   TIME: 10:24:35

Input Set : A:\21471 SEQ LSTG 6 16 06.TXT
Output Set: N:\CRF4\07102006\J584810.raw

```
209 Glu Asp Thr Thr Thr Pro Ile Pro Thr Thr Ile Met Ala Lys Asn Glu
210     130             135             140
211 Val Phe Cys Val Asp Pro Ala Lys Gly Gly Arg Lys Pro Ala Arg Leu
212 145             150             155             160
213 Ile Val Tyr Pro Asp Leu Gly Val Arg Val Cys Glu Lys Arg Ala Leu
214             165             170             175
215 Tyr Asp Val Ile Gln Lys Leu Ser Ile Glu Thr Met Gly Ser Ala Tyr
216             180             185             190
217 Gly Phe Gln Tyr Ser Pro Gln Gln Arg Val Glu Arg Leu Leu Lys Met
218         195             200             205
219 Trp Thr Ser Lys Lys Thr Pro Leu Gly Phe Ser Tyr Asp Thr Arg Cys
220     210             215             220
221 Phe Asp Ser Thr Val Thr Glu Gln Asp Ile Arg Val Glu Glu Glu Ile
222 225             230             235             240
223 Tyr Gln Cys Cys Asn Leu Glu Pro Glu Ala Arg Lys Val Ile Ser Ser
224             245             250             255
225 Leu Thr Glu Arg Leu Tyr Cys Gly Gly Pro Met Phe Asn Ser Lys Gly
226             260             265             270
227 Ala Gln Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Pro Thr
228         275             280             285
229 Ser Phe Gly Asn Thr Ile Thr Cys Tyr Ile Lys Ala Thr Ala Ala Ala
230     290             295             300
231 Lys Ala Ala Gly Leu Arg Asn Pro Asp Phe Leu Val Cys Gly Asp Asp
232 305             310             315             320
233 Leu Val Val Val Ala Glu Ser Asp Gly Val Asp Glu Asp Arg Ala Ala
234             325             330             335
235 Leu Arg Ala Phe Thr Glu Ala Met Thr Arg Tyr Ser Ala Pro Pro Gly
236             340             345             350
237 Asp Ala Pro Gln Pro Thr Tyr Asp Leu Glu Leu Ile Thr Ser Cys Ser
238         355             360             365
239 Ser Asn Val Ser Val Ala Arg Asp Asp Lys Gly Arg Arg Tyr Tyr Tyr
240     370             375             380
241 Leu Thr Arg Asp Ala Thr Thr Pro Leu Ala Arg Ala Ala Trp Glu Thr
242 385             390             395             400
243 Ala Arg His Thr Pro Val Asn Ser Trp Leu Gly Asn Ile Ile Met Tyr
244             405             410             415
245 Ala Pro Thr Ile Trp Val Arg Met Val Met Thr His Phe Phe Ser
246             420             425             430
247 Ile Leu Gln Ser Gln Glu Ile Leu Asp Arg Pro Leu Asp Phe Glu Met
248         435             440             445
249 Tyr Gly Ala Thr Tyr Ser Val Thr Pro Leu Asp Leu Pro Ala Ile Ile
250     450             455             460
251 Glu Arg Leu His Gly Leu Ser Ala Phe Thr Leu His Ser Tyr Ser Pro
252 465             470             475             480
253 Val Glu Leu Asn Arg Val Ala Gly Thr Leu Arg Lys Leu Gly Cys Pro
254             485             490             495
255 Pro Leu Arg Ala Trp Arg His Arg Ala Arg Ala Val Arg Ala Lys Leu
256             500             505             510
257 Ile Ala Gln Gly Gly Lys Ala Lys Ile Cys Gly Leu Tyr Leu Phe Asn
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VERIFICATION SUMMARY
PATENT APPLICATION: **US/10/584,810**

DATE: 07/10/2006
TIME: 10:24:36

Input Set : **A:\21471 SEQ LSTG 6 16 06.TXT**
Output Set: **N:\CRF4\07102006\J584810.raw**

L:11 M:270 C: Current Application Number differs, Replaced Current Application No
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date